

Abstract

In a process for separating air in a system comprising a gas turbine, including a compressor (1), a combustor (5) and an expander (17), said expander being coupled to the compressor, a natural gas conversion unit (23) and an air separation unit (20), air is compressed in the compressor, a first part (3) of the air is sent to the combustor and a second part (7) of the air is sent to the air separation unit, oxygen enriched gas (21) is sent from the air separation unit to the natural gas conversion unit, compressed nitrogen enriched gas (16) is sent upstream of the expander, a first stream (33) of natural gas is sent to the natural gas conversion unit, a second stream of natural gas (35) is sent to a natural gas liquefaction unit and work produced by the expander is used to operate a cycle compressor of a refrigeration cycle of the natural gas liquefaction unit.